
REMARKS

Claims 1 and 5 are presently pending in the application. Claims 2-4 and 6 have been canceled without prejudice or disclaimer. Reconsideration and allowance of all claims are respectfully requested in view of the following remarks.

Claims 1 and 6 were objected to for informalities.

The Examiner is thanked for the suggested amendment to Claim 1, but the objected to portion of the claim was correct as originally filed. The Examiner's suggestion would change the meaning of the claim to exclude Al, which is explicitly meant to be included in the list of possible B elements. In particular, B includes at least one element selected from Al and transition elements (excluding Co, Rh and the rare-earth elements). However, Claim 1 has been amended to make the meaning more clear. This amendment to clarify that Al is a possible B element, does not narrow the scope of Claim 1.

Claim 6 was objected to as allegedly being a substantial duplicate of Claim 1. Claim 6 is canceled herein without prejudice or disclaimer. Accordingly, this objection is now moot.

Claims 3 and 4 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting over Claims 1-5 of copending U.S. Application No. 10/520,824 ("the '824 application), in view of Monceux et al. (U.S. Pat. No. 5,622,680) ("Monceux"). Claims 3 and 4 are canceled herein without prejudice or disclaimer. Accordingly, this rejection is now moot.

Claims 1-6 stand rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Kaneko et al. (U.S. Patent No. 6,800,388)("Kaneko"). Applicants respectfully submit that the claims as amended are neither anticipated by, nor rendered obvious by the broad genus set

forth in Kaneko, as Kaneko does not teach or suggest the improved Rh-containing catalyst of the present invention.

Claim 1 is amended herein. This amendment is believed to overcome the anticipation rejection. In particular, claim 1 is amended herein to incorporate the recitations of claim 2. Claim 1 now specifies that the A constituent represents at least one element selected from only rare-earth elements each having a valence of 3 as the only valence. Kaneko does not teach or suggest an Rh-containing catalyst having at least one element selected from only rare-earth elements each having a valence of 3 as the only valence.

The requirement in the present invention for the presence of a rare earth metal that can have only a valence 3 is neither taught nor suggested in Kaneko. As indicated above, the A constituent of the Rh-containing catalyst of the presently claimed invention has at least one element selected from only rare-earth elements that can only have a valence of 3. The examples of Kaneko contain Sm (having a variable valence of 2 or 3) or Pr (having a variable valence of 3 or 4) in addition to La as the A constituent. Accordingly, the examples of Kaneko do not anticipate or render obvious the presently claimed invention.

In fact, Kaneko teaches away from the presently claimed perovskite structures in that the disclosed structures include certain alkaline earth metals, *e.g.*, Sr (strontium) and Ba (barium) having a valence of 2 as part of the A constituent. The presence of elements having a valence of 2 contributes to the following disadvantages in an Rh-containing perovskite structure:

“Rh becomes unstable in the perovskite structure under oxidative-reducing atmospheres, its grains grow after long-term use and the resulting catalyst may exhibit remarkably reduced catalytic activity.”

Additionally, Kaneko teaches away from the presently claimed catalysts by including Co and Gd among the possible B constituents, whereas in the present invention Co, Rh and rare earth elements are explicitly disclaimed on the B site of the perovskite structure.

The present invention describes a surprising result, that being the excellent longevity of the exhaust purification catalyst, which result is not suggested by Kaneko, directed to a fuel cell catalyst.

Accordingly, for at least these reasons, Kaneko does not teach or suggest the claimed structures invention as amended herein and withdrawal of the rejection is respectfully requested.

Claims 1-6 stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Monceux et al. (U.S. Patent No. 5,622,680) (“Monceux”).

The structure set forth in Monceux neither anticipates nor renders obvious the present invention, at least because the reference does not teach any catalyst within the claimed invention and because the genus of catalysts taught by Monceux does not teach or suggest the presently claimed catalysts.

Monceux defines its composition as $L_xL'_{1-x}M_yM'_z\Phi_{1-y-z}O_3$ where $0 \leq 1-x < 0.5$, $0.85 < y \leq 1$, $0 \leq z < 0.08$, and $0.85 < y+z \leq 1$. The location of L and L' in the Monceux structure is comparable to A and A' in the present invention. The location of M and M' in Monceux is comparable to B and Rh in the present invention. There is no comparable element in the present invention to Φ (cationic lacuna) in the reference.

The only reference example pointed out in the Action (one of only two examples in the reference including Rh at all) is catalyst 11, which includes Sr as the L' component. In fact, Sr is the preferred L' in the reference (See col. 1, lines 60-62). As indicated in the “Background

Art” of the present application, when prior composite oxide catalysts include elements having a valence of 2, such as Sr on the A site (corresponding to L and L' in the reference), “Rh becomes unstable in the perovskite structure under oxidative-reducing atmospheres, its grains grow after long-term use and the resulting catalyst may exhibit remarkably reduced catalytic activity.” Consistent with this recognition of disadvantages of the prior compositions, none of the present claims includes an A component having a valence of 2, such as Sr. Because the only Rh-including structures of Monceux include Sr, and Sr is the preferred L' component of Monceux, Monceux does not teach the claimed catalysts, and does not anticipate the claimed invention.

Monceux also does not render the present claims obvious, as the perovskite structures of the reference are different from those in the present invention, and the reference does not teach or suggest the aspects of the present structure which provide the excellent longevity of the present exhaust purification catalysts. As indicated above, the Rh-containing catalyst of the present invention has at least one rare-earth element that can only have a valence of 3. The requirement of at least one element selected from only rare-earth elements that can only have a valence of 3 found in the present invention, is neither taught nor suggested in Monceux. In fact, Monceux teaches away from the presently claimed perovskite structures in that the disclosed structures include certain alkaline earth metals, *e.g.*, Sr (strontium) and Ba (barium) having a valence of 2 as part of the A constituent. As indicated above Sr is the preferred L' component in the reference.

Additionally, Monceux teaches away from the presently claimed catalysts because Co is a preferred metal for M in Monceux (see Col. 1, lines 60-61), whereas Co is explicitly disclaimed on the corresponding B site in the present invention to achieve the desired

stability of Rh in the catalyst imparting long life. Additionally, the requirement of Rh in the present invention is absent in Monceux.

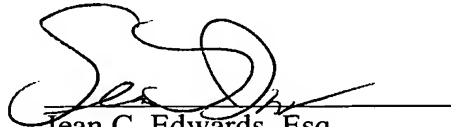
For at least these reasons, it is believed that Monceux does not suggest the claimed structures to those skilled in the art.

For at least the reasons set forth herein, Applicants submit that Monceux neither teaches nor suggests the claimed invention, and withdrawal of the rejection is respectfully requested.

If the Examiner believes that there is any issue which could be resolved by a telephone or personal interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee for such an extension is to be charged to Deposit Account No. 50-0951.

Respectfully submitted,


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